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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/731,005	12/10/2003	Jae-Cheol Lee	1349.1302	6349
21171	7590	09/22/2005	EXAMINER	
STAAS & HALSEY LLP SUITE 700 1201 NEW YORK AVENUE, N.W. WASHINGTON, DC 20005			VO, ANH T N	
			ART UNIT	PAPER NUMBER
			2861	

DATE MAILED: 09/22/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

**Office Action Summary**

Application No.

10/731,005

Applicant(s)

LEE ET AL.

Examiner

Anh T.N. Vo

Art Unit

2861

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☐ Responsive to communication(s) filed on \_\_\_\_.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-27 is/are pending in the application.  
4a) Of the above claim(s) \_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-27 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).  
a) ☒ All b) ☐ Some \* c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |   |  |
|---|--|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)   | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. ____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                                  | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)            |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date ____ | 6) <input type="checkbox"/> Other: ____  |

## DETAILED ACTION

### *Priority*

Receipt is acknowledged of papers submitted under 35 U.S.C. 119(a)-(d), which papers have been placed of record in the file.

### *CLAIM REJECTIONS*

#### *Claim Rejections - 35 USC § 102*

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless --

(a) the invention was known or used by others in this country, or patented or described in a printed publication in this or a foreign country, before the invention thereof by the applicant for a patent.

Claims 1, 5-6 and 14 are rejected under 35 USC 102 (b) as being anticipated by applicants' admitted prior art (as shown in Figures 1-4).

Applicants' admitted prior art discloses in Figures 1-4 an ink cartridge comprising:

- a cartridge body (102) partitioned into foam chambers (106) and ink chambers (108), and having a first welding part (122) and a second welding part (124);
- a lid (104) having a third welding part (126), engageable and weldable with the first welding part (122) of the cartridge body (102), and a fourth welding part (128) on the bottom thereof in which the second welding part (124) is insertable;
- at least one ink head (117) provided on the bottom of the cartridge body (102) to eject ink; and at least one ink filter (115) provided on an upper side of each ink head to prevent foreign materials or bubbles from flowing in;
- wherein the cartridge body (102) holds one or more color inks, and further includes one or

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more partitions (110) partitioning different color inks;

- wherein the upper end portions of the second welding part (124) are a convex shape; and
- wherein a plurality of ink injection holes (119, 120), for injecting ink into the ink chambers (106, 108), are each sealed by a ball (not shown).

Claims 26-27 are rejected under 35 USC 102 (b) as being anticipated by Altendorf (US Pat 6,183,072).

Altendorf discloses in Figures 1B-4D an inkjet storage container comprising:

- a cartridge body (22) having a first welding part (87);
- a lid (28) having a second welding part (86), engageable and weldable with the first welding part, wherein at least one of the first and second welding parts has a concave groove (a concave groove is between two elements 86 to receive a projection 87, see Figs. 4A-4B or a concave groove is located in a lid 28 and received an element 110 of the cartridge body 22, see Figure 3B) in which the other of the first and the second welding parts is insertable and a predetermined space occurs on both sides of the engaged first and second welding parts; wherein the predetermined space is substantially equal to, or less than, 0.4 mm; and
- wherein the lid (28) and the cartridge body (22) do not substantially slide against each other when vibration is applied by an ultrasonic welder.

### ***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior arts are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

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Claims 2-4, 7-13 and 15-25 are rejected under 35 USC 103 (a) as being unpatentable over applicants' admitted prior art (as shown in Figures 1-4) in view of Altendorf (US Pat. 6,183,072).

Applicants' admitted prior art (as shown in Figures 1-4) discloses the basic features of the claimed invention as stated above but does not disclose first welding part that has a first section horizontally protruded in cross-section and a second section vertically protruded to the first section, and the third welding part has a third section vertically protruded, a fourth section horizontally protruded, and a fifth section in a diagonal cross-sectional shape connecting the third section and the fourth section; wherein the first section has a concave groove on the upper end portion thereof; and welding parts of lid and cartridge body are formed in triangular shapes and/or rectangular shapes and/or combining triangular and rectangular shapes with ranges from substantially 20 to 70 degrees and/or from substantially 30 to 150 degrees.

Altendorf discloses in Figures 1B-4D an inkjet storage container comprising:

- a cartridge body (22) having a first welding part (87);
- a lid (28) having a second welding part (86), engageable and weldable with the first welding part, wherein at least one of the first and second welding parts has a concave groove (a concave groove is between two elements 86 to receive a projection 87, see Figs. 4A-4B or a concave groove is located in a lid 28 and received an element 110 of the cartridge body 22, see Figure 3B) in which the other of the first and the second welding parts is insertable and a predetermined space occurs on both sides of the engaged first and second welding parts; wherein the predetermined space is substantially equal to, or less than, 0.4 mm;
- wherein the lid (28) and the cartridge body (22) do not substantially slide against each other when vibration is applied by an ultrasonic welder;
- first welding part (63) that has a first section horizontally protruded in cross-section and a second section vertically protruded to the first section, and the third welding part (86) has a third section vertically protruded, a fourth section horizontally protruded, and a fifth section in a

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diagonal cross-sectional shape connecting the third section and the fourth section (Figs. 4A-4D); and

- wherein the first section has a concave groove on the upper end portion thereof (Fig. 4C).

It would have been obvious at the time the invention was made to a person having ordinary skill in the art to incorporate the teaching of Altendorf in the Applicants' admitted prior art (as shown in Figures 1-4) for the purpose of stably sealing between a lid and a cartridge body without ink leakage by using adhesive or ultrasonic welding.

Applicants' admitted prior art (as shown in Figures 1-4) in view of Altendorf disclose the claimed invention except for "welding parts of lid and cartridge body are formed in triangular shapes and/or rectangular shapes and/or combining triangular and rectangular shapes with ranges from substantially 20 to 70 degrees and/or from substantially 30 to 150 degrees". It would have been obvious to one having ordinary skill in the art at the time the invention was made to select changes in the shape of the lid or of the cartridge body for the purpose of stably engaging or strongly sealing the lid with the cartridge body to avoid ink leakage, since it is a mechanical design expedient for an engineer depending upon a particular environment and the applications in which the ink jet cartridge is to be used. In re Daily, 357 F.2d 669, 149 USPQ 47 (CCPA 1966). See MPEP 2144.04.

### ***Citation of Pertinent Prior Art***

The prior art made of record and not relied upon is considered pertinent to applicants' disclosure. The prior art references (US Pat. 6,281,911; US Pat. 6,758,556; US Pat. 6,390,613; US pat. 5,409,134) cited in the PTO 892 form show an ink cartridge that is deemed to be relevant to the present invention. These references should be reviewed.


### ***CONCLUSION***

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Any inquiry concerning this communication or earlier communications from the examiner should be directed to Examiner Anh Vo whose telephone number is (571) 272-2262.

The examiner can normally be reached on Tuesday to Friday from 9:00 A.M. to 7:00 P.M..

The fax number of this Group 2861 is (571) 273-8300.



**ANH T.N. VO**  
**PRIMARY EXAMINER**  
September 19, 2005